A Practical Approach to Working with VA-Purchased "Community" Care Data

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Audience

- Investigators and Analysts
- Who have been told to "pull community care data"
- Who want to assess how difficult using community care data may be
- Who want to know what to "put in grant"
 - Data sources
 - Fields to reference
 - Concordance between data sources

The VA-purchased/community care data landscape is often in flux. All mistakes and omissions are my own.



Agenda

- Overview of community care data
- Data sources
- Deduplication
- PIT
- CCRS
- eCAMS



Overview: What is VA-Purchased Care?

- VA-purchased or "community care" (CC) is care paid for by the VA but delivered by providers outside a VA facility.
 - This care can take place in a multitude of settings
 - Providers could be VA staff at an academic affiliate, DoD providers, IHS/THP providers, or non-VA providers.
 - The Office of Integrated Veteran Care (IVC) oversees VA-purchased care
- VA-provided care
 - Care delivered in VA Healthcare Systems (VAHCS) and other VA facilities

IHS: Indian Health Services

THP: Tribal Health Program



Overview: VA-Purchased Care Process

• Consult created • Consult sent to local IVC office

Referral/ Authorization

- Eligibility determined
- SEOC selected
- CC provider selected
- Referral created
- Authorization granted
- Appointment is made

Claims

- Appointment(s) occur
- Provider submits claim(s)
- oInstitutional
- Professional
- o Dental
- $\circ \textbf{Prescription}$
- \circ DME
- Claim adjudication

Payment

- Claim authorization sent to FMS
- Payment data sent to Treasury
- Payment sent to provider
- Payment reconciliation data sent to FMS and claims processing system

SEOC: Standardized Episode of Care

DME: Durable Medical Equipment

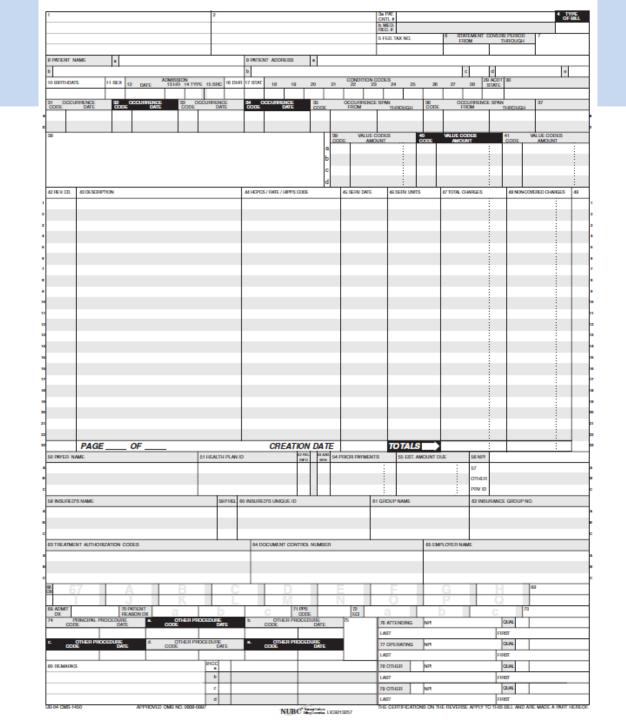
FMS: Financial Management System



What is Claims Data?

- Form based
 - HCFA or CMS 1500
 - UB92/UB04 or CMS 1450
 - Electronic submission now, but hasn't always been
- Identifies when services were provided
- Identifies what services were provided
- Identifies who provided services
- Identifies who services were provided to

10/11/2022



UB92

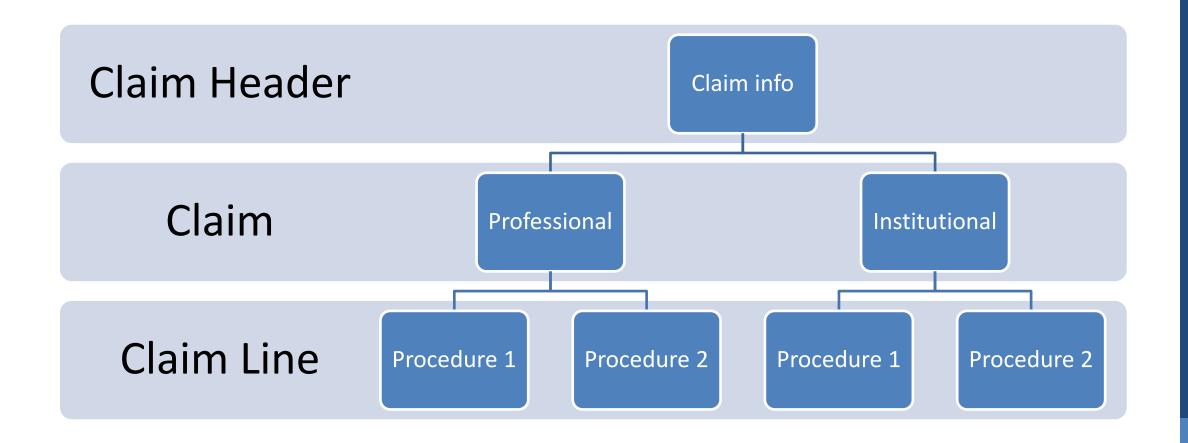
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HEALTH INSURANCE CLAIM FORM			
PPROVED BY NATIONAL UNIFORM CLAIM COMMITTEE (NUCC) 02	12		PICA TTT
MEDICARE MEDICAID TRICARE CHAN	PVA GROUP FECA OTHER	1a, INSURED'S I.D. NUMBER	(For Program in Item 1)
(Medicare#) (Medicaid#) (ID#/DoD#) (Memi	9/ (OH) HEALTH PLAN BLK LUNG (IOH)		
2. PATIENT'S NAME (Last Name, First Name, Middle Initial)	3. PATIENT'S BIRTH DATE SEX	4. INSURED'S NAME (Last Name, First Name, M	ddle [nitia])
5. PATIENT'S ADDRESS (No., Street)	6. PATIENT RELATIONSHIP TO INSURED Self Spouse Child Other	7. INSURED'S ADDRESS (No., Street)	
TY STA	E 8. RESERVED FOR NUCC USE	CITY	STATE
ZIP CODE TELEPHONE (Include Area Code)		ZIP CODE TELEPHONE	Include Area Code)
OTHER INSURED'S NAME (Last Name, First Name, Middle Initial)	10. IS PATIENT'S CONDITION RELATED TO:	11. INSURED'S POLICY GROUP OR FECA NUM	
OTHER INSURED'S POLICY OR GROUP NUMBER	a. EMPLOYMENT? (Current or Previous)	a. INSURED'S DATE OF BIRTH	SEX F
, RESERVED FOR NUCC USE	b. AUTO ACCIDENT? PLACE (State)	b. OTHER CLAIM ID (Designated by NUCC)	
: RESERVED FOR NUCC USE	c. OTHER ACCIDENT?	c. INSURANCE PLAN NAME OR PROGRAM NA	ME .
I. INSURANCE PLAN NAME OR PROGRAM NAME	10d, CLAIM CODES (Designated by NUCC)	d. IS THERE ANOTHER HEALTH BENEFIT PLAY	1?
READ BACK OF FORM BEFORE COMPLE 12. PATIENT'S OR AUTHORIZED PERSON'S SIGNATURE 1 authorize	ING & SIGNING THIS FORM. he refease of any medical or other information necessary	YES NO If yes, complete 13. INSURED'S OR AUTHORIZED PERSON'S S payment of medical benefits to the undersigne	tems 9, 9a, and 9d. GNATURE I authorize d physician or supplier for
 PATIENT'S OR AUTHORIZED PERSON'S SIGNATURE 1 authorize to process this claim. I also request payment of government benefits of below. 	ner to myself or to the party who accepts assignment	services described below.	s priyonali de dappine idi
SIGNED	DATE	SIGNED	
4. DATE OF CURRENT ILLNESS, INJURY, of PREGNANCY (LMP)	S. OTHER DATE MM DD YY	16. DATES PATIENT UNABLE TO WORK IN CUI	
7. NAME OF REFERRING PROVIDER OR OTHER SOURCE	17a. 17b. NPI	18. HOSPITALIZATION DATES RELATED TO CU	RRENT SERVICES
9. ADDITIONAL CLAIM INFORMATION (Designated by NUCC)		20. OUTSIDE LAB? S CHA	AGES
11. DIAGNOSIS OR NATURE OF ILLNESS OR INJURY Relate A-L to	ervice line below (24E)	22. RESUBMISSION ORIGINAL REF	
A. B. L.	icomo.;	CODE ORIGINAL REF	. NO.
E. F.		23. PRIOR AUTHORIZATION NUMBER	
l. L. J. L.	L		
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		NPI	
25. FEDERAL TAX I.D. NUMBER SSN EIN 26. PATIENT	S ACCOUNT NO. 27. ACCEPT ASSIGNMENT?	28. TOTAL CHARGE 29. AMOUNT PAID	30. Rsvd for NUCC Use
SIN EN 20. PATIENT	S ACCOUNT NO. 27. ACCEPT ASSIGNMENT? YES NO	\$ \$ \$	Sol hard for Notice Use
31. SIGNATURE OF PHYSICIAN OR SUPPLIER NULLDING DEGREES OR OREDENTIALS (I certify that the statements on the reverse apply to this bill and are made a part thereof.)	FACILITY LOCATION INFORMATION	33. BILLING PROVIDER INFO & PH #)
		A AID	
SIGNED DATE 8.	D.	a. NP b.	



Claims Data Structure





How do Claims Data Sources Differ?

- VA has multiple claims sources
- Considerations when selecting a claims data source
 - Time Range Covered
 - Sources of claims
 - Primary vs Secondary source
 - Ease of use



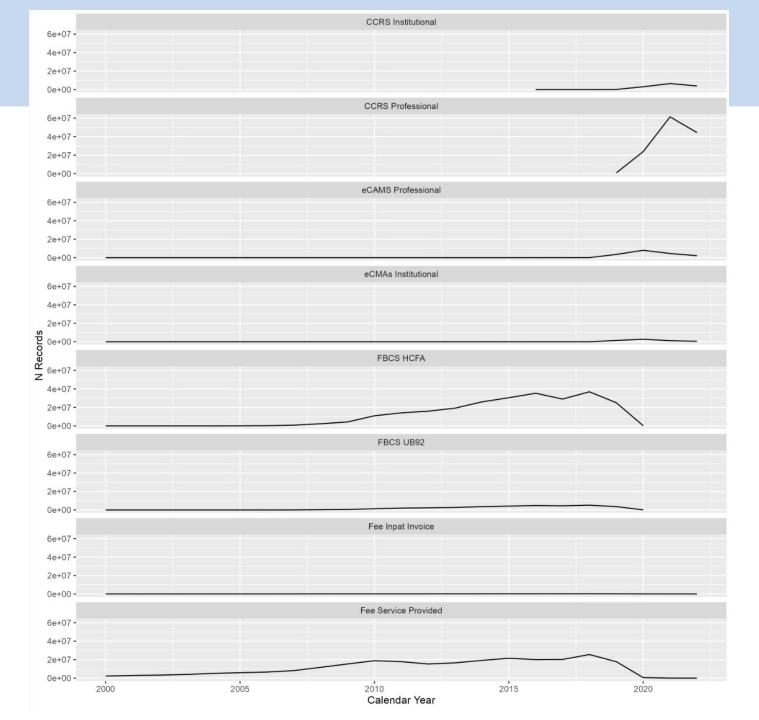
Claims Data Sources

Data Source	Claim Time Range	Type of Claims	Primary/Secondary Source
VISTA FEE	1985—current		Primary
MedSAS VISTA Fee	1985—current	Contains Plexis	Primary
FBCS ^d	2014—2019		Primary
PIT	2000—current	Contains Plexis	Secondary
CCRS	2019—current	Community Care Network, MISSION only	Primary
eCAMS	2018—current	Community Care Non- Network Claims, replaced FBCS	Primary
CDS ⁱ	2019—current	All claims	Secondary

d: Depreciated

i: In development







Should I use PIT?

- PIT is meant to detect fraud, waste, and abuse
 - IVC recommends against using it
 - But it is the only way to access claims from some systems
- Use PIT cautiously until CCRS and eCAMS come onto DART
 - Know what claims are only in PIT
 - Plexis
 - Expedited payments

PIT: Performance Integrity Tool

IVC: Office of Integrated Veterans Care



Data Source Recommendations

- Use CCRS and eCAMS when they come onto the DART
- Use CDS when it comes onto the DART
 - Will replace all other sources
- If you can wait for CCRS/eCAMS and have resources to learn them then do so
 - Otherwise use PIT at your own risk
- If you can wait for CDS then do!



Duplication: Some causes

- Separate claims submitted for same service
 - Professional + Institutional
- Multiple claim submissions
- Slightly different dates between systems
- Claims in multiple systems
 - Fee + PIT
 - FBCS + PIT
 - CCRS + PIT
 - eCAMS + PIT

Some Methods of Deduplication

- Only include paid/accepted/approved and current claims
 - Current flags only don't work well with CCRS claims
- Between sources
 - Claim id
 - VIReC factbook for PIT and FBCS
- Between and/or within sources
 - Patient + procedure
 - Patient + day

Picking a Deduplication Method

What method of deduplication you choose depends on what you are measuring

- Utilization? Probably deduplicate at the patient-day
 - Allows for alignment between VA-provided and VA-purchased data
- Cost? Probably need to keep both institutional and professional so you can sum the payments
- People with X diagnosis: maybe you don't want to exclude rejected claims
 - Some claims are rejected not because the care wasn't delivered or the diagnosis was incorrect, but because the
 - Procedures not included in the SEOC
 - Occurrence of CPTs exceeds what is allowed by a SEOC



Fields to consider across sources pt 1

	Patient SSN	Patient ICN
FBCS*	Fbcs.hcfa.1a fbcs.ub92.box60a	_
FEE	Spatient.PatientSSN	Spatient.PatientICN
PIT	Sveteran.PITPatient.MemberID	Sveteran.PITPatient.PatientICN
CCRS	Ccrs.claim_cob.insured_id	Ccrs.claim_cob.insured_id
ECAMS	Ecams_replica.ad_claim_header.mbr_sid -> ecams_replica.mbr_dmgrphc.social_security_nmbr	ecams_replica. ad_claim_header. mbr_identifier Where MBR_IDNTFR_TYPE_CID=20

^{*} Some claims are scanned, and data imported via optical text recognition



PIT

- PIT has claims from multiple sources, including ones that researchers don't currently have direct access to
- Multiple claim sources now flowing into PIT
 - Each primary claims database has its own structure
 - Creating differences between sources within PIT



Identifying claim source in PIT

Data Source	SourceSystem	Batchlogkey	
VISTA FEE	Does not flow into PIT FBCS		
MedSAS VISTA Fee			
FBCS	FBCS	RXVXXX	
CCRS	CCRS	CCRS_XXXX	
eCAMS	CCNNC	CCNNC_XXX	
Plexis	FBCS	VACDB_XXX	



Comparing Claims in PIT to Source

- Fee and FBCS already covered by VIReC
- CCRS
 - Not all CCRS resubmissions are in PIT
 - PIT does not always contain the most recent submission
 - Delay between CCRS and PIT
- eCAMS



Why claim status may be missing in PIT

- Sometimes ClaimStatus is NULL in PIT in these cases:
 - Claim XM (SourceSystem= 'CXM')
 - EDI (Claims Processing & Eligibility; CHAMPVA claims)
 - FBCS (SourceSystem= 'FBCS'; using CurrentFlag='Y' will remove most of these)
- ClaimStatus is based on processed claims
 - Some claims are loaded into PIT before processing
 - ClaimXM & EDI
 - May be better to look at PITVAPayment tables
 - EDI



Partition Key Issues

- Sometimes the partition key isn't the data you want
 - NULL values in partition key
 - You want a different date

Schema	Partition Key	Issue
Fee. FeeInitialTreatment	InitialTreatmentDateTime	
Fee. FeeInpatInvoice	InvoiceReceivedDateTime	Usually want TreatmentFromDateTime
PIT. PITClaim	ServiceDate	Is often NULL (91.4% of records)
PIT. PITInstitutionalClaim	ServiceDate	Is always NULL (100% of records)
PIT. PITProfessionalClaimDetails	ServiceFromDate	



"But I want that date!" What to do

When you want to a field other than the partition key

```
FROM CDWWork.Fee.FeeInpatInvoice

where InvoiceReceivedDateTime > convert(datetime2(0),'2015-01-01')
and TreatmentFromDateTime > convert(datetime2(0),'2015-01-01')
```

- When partition key is NULL (or truly unknown)
 - Be cautious of your query plan!

Intro to CCRS

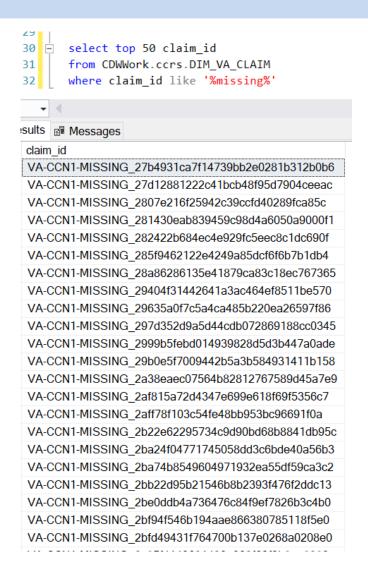
- Community Care Reimbursement System (CCRS)
- Claims for providers in the Community Care Network (CCN)
 - MISSION Act
 - Rolling deployment
 - Start of Health Care delivery 6/26/2019
 - Full Health Care delivery: 1/25/2022
- Permissions: CDW_SPatient





CCRS Structure

- Status at the claim line, not claim level
- Contains resubmissions
- "Test" records: claim_ids containing 'MISSING'





CCRS Tables of Interest

- Claim header: dim_va_claim
- Patient Demographics: claim_cob
- Claim status: decision
- Institutional claim information: dim_institutional_claim
 - F_Institutional_Medical_Claim_Details
- Professional claim information: dim_professional_claim
 - F_Professional_Medical_Claim_details
- Diagnosis information: claim_diagnosis (ICD-10)
- Procedure information: claim_procedure (majority—96.4%—ICD-10 PCS)
 - F_Professional_Medical_Claim_details (CPT/HCPCS, a few records with HIPPS)
 - F_Institutional_Medical_Claim_Details (CPT/HCPCS, 3% of records with HIPPS codes)

CCRS Joins

FKTable ¹	FKField ¹	PKTable ²	PKField ²
claim_cob	claim_key	dim_va_claim	claim_key
dim_institutional_claim	claim_key	dim_va_claim	claim_key
F_Institutional_Medical_Claim_Details	claim_key	dim_institutional_claim	claim_key
dim_professional_claim	claim_key	dim_va_claim	claim_key
F_Professional_Medical_Claim_details	claim_key	dim_professional_claim	claim_key
claim_diagnosis	claim_key	dim_va_claim	claim_key
Decision	Claim_key	F_Professional_Medical_Claim_details	claim_key
Decision	Claim_key	F_Institutional_Medical_Claim_Details	claim_key

¹ Foreign Key



² Primary key

CCRS Structure: handling resubmissions

- Claims tied together based on resubmissions
- Dim_va_claim
 - One row per submission
 - Prior_claim_id and prior_claim_key link to the prior (1) submission
- Ledger table
 - Not all resubmissions are in ledger
 - Contains 'root' (initial) claim key: RootClaimKey field
- Max resubmissions by year
 - 2019 up to 32 resubmissions
 - 2020 up to 9 resubmissions
 - 2021 & 2022 up to 10 resubmissions



Example query

 There are some claims with non-NULL values for prior_claim_key in the dim_va_claim table that are not in the ledger



Claim Statuses in CCRS

Decision Value	Meaning
APPROVED	
BILL_SENT	
DENIED	"If counting paid claims, exclude"
NO_ACTION	"Lines that weren't paid as part of the normal dynamic of claims payment methodology but may still be relevant to see the overall picture of what was provided on that claim" Not the same as denied
PAID	Paid & processed claims
PENDING_REVIEW	Awaiting processing; no data in payment tables
REJECTED	Most with no data in payment tables
VOID	Most with no data in payment tables



Intro to eCAMS

- Electronic Claims Adjudication Management System
- Community Care Non-Network Claims (CCNNC)
 - Claims for emergency care
 - Claims for providers not in a CCN
- Permissions: CDW_SPatient
- ecams_replica
 - Tables starting with Ad_ tables = adjudicated claims
- Contains resubmissions
 - Root claim is usually original_TCN
 - Immediately prior claim is usually parent_TCN



eCAMS structure: claim type

- Tables are not explicitly split into institutional and professional
 - Use values in ecams_replica.ad_claim_header.Invoice_type_lkpcd to determine type of claim

```
16
17 🗀
      SELECT TOP (1000) [LKP_VALUE_SID]
18
           ,[LKP_DOMAIN_CID]
          ,[LKP_VALUE_CODE]
19
          ,[LKP VALUE NAME]
20
          ,[LKP_VALUE_DESC]
21
          ,[OPRTNL FLAG]
22
          ,[CREATED_BY]
23
24
          ,[CREATED_DATE]
           ,[MODIFIED_BY]
25
26
           ,[MODIFIED_DATE]
27
      FROM [CDWWork].[ecams_replica].[lookup_value]
      where LKP DOMAIN CID=34
28
```

% ▼ ◀									
Results Messages									
LKP_VALUE_SID	LKP_DOMAIN_CID	LKP_VALUE_CODE	LKP_VALUE_NAME	LKP_VALUE_DESC	OPRTNL_FLAG	CREATED_BY	CREATED_DATE	MODIFIED_BY	MODIFIED_DATE
11563.000000	34.000000	Н	Pharmacy	Pharmacy	Α	1.000000	2006-08-03 17:53:23	1415.000000	2019-12-05 19:25:54
11564.000000	34.000000	S	Social Services	Social Services	1	1.000000	2006-08-03 17:53:23	1415.000000	2019-10-18 16:40:08
2046.000000	34.000000	F	Internal Feed	Internal Feed	1	1.000000	2002-11-08 00:00:00	1415.000000	2019-10-18 16:40:08
500002834.000000	34.000000	Α	All	All	1	1.000000	2009-10-06 14:33:33	1415.000000	2019-10-18 16:40:08
134.000000	34.000000	D	Dental	Dental	Α	1.000000	2002-10-25 00:00:00	1.000000	2002-10-25 00:00:00
135.000000	34.000000	1	Institutional	Institutional	Α	1.000000	2002-10-25 00:00:00	1.000000	2002-10-25 00:00:00
136.000000	34.000000	Р	Professional	Professional	Α	1.000000	2002-10-25 00:00:00	1.000000	2002-10-25 00:00:00



eCAMS Structure: claim status

```
select top 50 head.tcn, head.BSNS_STATUS_CID, head.BSNS_STATUS_TYPE_CID, s.STATUS_NAME
FROM [CDWWork].[ecams_replica].ad_claim_header as head
inner join CDWWork.ecams_replica.status as s on head.BSNS_STATUS_CID=s.STATUS_CID
and head.BSNS_STATUS_TYPE_CID=s.STATUS_TYPE_CID
```

% -	∢			
Results	Messages			
tcn		BSNS_STATUS_CID	BSNS_STATUS_TYPE_CID	STATUS_NAME
3020	029600040617000	71.000000	8.000000	Paid
3020	029600040615000	71.000000	8.000000	Paid
302	029600040618000	71.000000	8.000000	Paid
302	029600040619000	72.000000	8.000000	Denied
302	029600040620000	72.000000	8.000000	Denied



eCAMS Tables of Interest

- Claim header: ad_claim_header
- Patient Demographics: mbr_demographic
- Claim status: status
- Claim line: ad_claim_line
- Diagnosis information:
 - ad_clm_hdr_x_diagnosis
 - ad_clm_x_dgns_x_clm_ln
- Procedure information: ad_clm_hdr_x_procedure (CPT/HCPCS and ICD-10 PCS)

eCAMS Joins

FKTable ¹	FKField ¹	PKTable ²	PKField ²
ad_claim_header	bsns_status_cid	status	status_cid
ad_claim_header	bsns_status_type_cid	status	status_type_cid
ad_claim_line	claim_header_sid	ad_claim_header	claim_header_sid
ad_clm_hdr_x_diagnosis	claim_header_sid	ad_claim_header	claim_header_sid
ad_clm_hdr_x_procedure	claim_header_sid	ad_claim_header	claim_header_sid
ad_claim_header	mbr_sid	mbr_dmgrphc	mbr_sid

¹ Foreign Key



² Primary Key

Summary

- PIT is mostly complete (in terms of claims submitted across systems)
 - IVC recommends against using PIT
 - Delay in claims moving from source systems to PIT
 - PIT contains unprocessed claims—Be careful and thoughtful!
 - Duplication of claims is an issue
 - Currentflag='Y' used to take care of most of these, but no longer does because of CCRS
- CCRS and eCAMS are currently being added to the DART
 - Different structures than each other and than PIT
- CDS is in development
 - FY19 onwards
 - Most recent/summarized claims from all systems
 - Initial iteration will be available for operations in December
 - Will be available for researchers in 2023



Resources: Weblinks

VIReC

Community Care for Veterans (va.gov)

IVC

- OCC FGB Landing Page (sharepoint.com)
- Community Care Home (va.gov)
- Community Care Hub Home VHA Office of Integrated Veteran Care (va.gov)
- Data locations

Community Care Research Evaluation & Knowledge Center

HERC

BISL Daily Community Care CDW-Raw Updates

Non-VA resources

- Find, Request and Use CMS Data | ResDAC
- CMS claims manual
- CMS costs



Thank you erin.beilstein-wedel@va.gov

Questions?

